

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number  
**WO 2005/007871 A3**

- (51) International Patent Classification<sup>7</sup>: **C12Q 1/68**, C12P 19/34, C07H 21/04, C12N 15/00
- (21) International Application Number: PCT/US2004/022064
- (22) International Filing Date: 8 July 2004 (08.07.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/485,482 8 July 2003 (08.07.2003) US
- (71) Applicants (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th floor, Oakland, CA 94607 (US). **STATE OF QUEENSLAND ACTING THROUGH QUEENSLAND HEALTH** [AU/AU]; 147-163 Charlotte Street, Brisbane, Queensland (AU). **THE UNIVERSITY OF QUEENSLAND** [AU/AU]; Brisbane, QLD 4072 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **NOBLE, Ernest, P.** [US/US]; University of California, Los Angeles, Box 951759, Room 38-154 NPI, Los Angeles, CA 90095-1759 (US). **YOUNG, Ross, M.** [NZ/AU]; The University of Queensland, 2nd Floor, Psychiatry Department, PAH, Queensland 4102 (AU). **LAWFORD, Bruce, R.** [AU/AU]; Royal Brisbane Hospital, HADS Unit RBH, Queensland 4029 (AU).
- (74) Agent: **CANADY, Karen, S.**; Gates & Cooper LLP, 6701 Center Drive West, Suite 1050, Los Angeles, CA 90045 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**  
— of inventorship (Rule 4.17(iv)) for US only
- Published:**  
— with international search report  
— with amended claims
- (88) Date of publication of the international search report: 15 September 2005
- Date of publication of the amended claims: 27 October 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: GENETIC MARKER OF RESPONSE TO ATYPICAL ANTIPSYCHOTICS AND ANTIDEPRESSANTS AND METHODS FOR USE THEREOF

(57) Abstract: The invention provides methods of identifying candidate psychiatric patients, or patients with movement disorder, for treatment with medication that acts at a D2 dopan-line receptor site or increases density of D2 dopamine receptors. The method comprises determining a patient's DRD2 genotype. Patients having the Taq1A (A1) allele (A1 + allelic status) are candidates for treatment with high dose, high binding antipsychotics and/or SSRIs that influence D2 receptor density. Patients lacking the Taq1A allele (A1- allelic status) are candidates for treatment with low dose, low binding atypical antipsychotics, and are not likely to respond well to these SSRIs.



WO 2005/007871 A3